

FINANCIAL ASSISTANCE APPLICATION



**FILE
COPY**

DATE TO PROJECT OFFICER: 6/30/05

REMINDER >>> To avoid delays, please do the following:

>>>**For Initial Award:** Please **DO NOT** start your FR or CN until you receive an email notification from GMO.

For Amendment Award: There will be **NO email notification**; therefore, you can initiate the FR as soon as you receive the application from GMO.

(11224)

TO: Peter Kozelka MAIL CODE: WJK-2

CERTIFIED PROJECT OFFICER YES NO** REFRESHED _____

CC: _____ (Supervisor)

FROM: Clee, Grants Specialist, PMD-7

APPLICANT AZ DEQ

GRANT ID.#: CP-97995301-1 PROGRAM Water Quality 104(b)(3)

The Grants Management Office (GMO) has received an original application for the above mentioned applicant. Your copy is attached for your review. Using IGMS, please prepare a Funding Recommendation (FR) and Commitment Notice (CN).



Project Officer Technical & Cost Review: The Division Directors approved a technical and programmatic checklist developed by the Grants Advisory Group (GAG). This checklist is to be completed during the review of each application (including work plan) for new awards and amendments that increase funding. A copy of the completed checklist or a similar documentation should be kept in the Project Officer Program File. The checklist is available on R9 Grants Database.



Filling out Your FR - Review and complete **all** questions. (See IGMS Help Topics instructions- R9 Grants Database)

Any specific requirements: include any specific programmatic condition(s) as applicable to your program/project.



FR and CN Routing: Electronically route the completed FR through Quality Assurance Program (and others, as applicable) and your immediate supervisor. Once the FR and CN have been finalized, **notify the Grants Specialist** listed above. For IGMS questions, call **Fareed Ali @ 2-3665, Renee Chan @ 2-3675 or Alba Espitia @ 2-3667.**

APPLICATION FOR FEDERAL ASSISTANCE

| | |
|---------------------------------------|------------------------------|
| 2. Date Submitted 27-Jun-05 | Applicant Identifier |
| 3. Date Received By State | State Application Identifier |
| 4. Date Received By Federal Agency | Federal Identifier |

1. TYPE OF SUBMISSION

Application
 Construction Construction
 Non Construction Non Construction

5. APPLICANT INFORMATION

| | |
|--|---|
| Legal Name Arizona Department of Environmental Quality | Organizational Unit Department of Environmental Quality |
| Organizational DUNS: 804-915-312 | Division: Water Quality Division |
| Address: Street: 1110 West Washington Street | Name and telephone number of person to be contacted on matters involving this application (give area code) Prefix: Ms. First Name: Joan. |
| City: Phoenix | Middle Name: |
| County: Maricopa County | Last Name: Card |
| State: Arizona Zip Code: 85007 | Suffix: |

| | |
|---------------------|--|
| Country: USA | Email Address: Card.Joan@azdeq.gov |
|---------------------|--|

| | | |
|--|---|--|
| 6. EMPLOYER IDENTIFICATION NUMBER (EIN) 86-6004791 | Phone Number: (give area code) 602-771-2306 | Fax Number (give area code) 602-771-4834 |
|--|---|--|

8. TYPE OF APPLICATION:

New Continuation Revision

If revision, enter appropriate letter(s) in Box(es)
 A. Increase Award B. Decrease Award **A**
 C. Increase Duration D. Decrease Duration Other (Specify):

7. TYPE OF APPLICANT
STATE
Other (Specify):

10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER
TITLE: 104(b) (3) Lake Mary Region Mercury TMDL Grant

9. NAME OF FEDERAL AGENCY:
Environmental Protection Agency, Region IX

11. DESCRIPTIVE TITLE OF APPLICANTS PROJECT
104(b) (3) Lake Mary Region Mercury TMDL Grant

12. AREAS AFFECTED BY PROJECT (cities, counties, states, etc.)
Statewide DE-OB #'S

13. PROPOSED PROJECT

| | |
|-------------------------------|---------------------------------|
| START DATE 7/1/2004 | ENDING DATE 6/30/2006 |
|-------------------------------|---------------------------------|

14. CONGRESSIONAL DISTRICTS OF:

| | |
|---------------------------|--|
| a. Applicant 04 | b. Project 01,02,03,04,05,06,07,08 |
|---------------------------|--|

15. ESTIMATED FUNDING:

| | |
|-------------------|-------------------|
| a. Federal | 160,000.00 |
| b. Applicant | .00 |
| c. State | 30,000.00 |
| d. Local | .00 |
| e. Other | .00 |
| f. Program Income | .00 |
| g. TOTAL | 190,000.00 |

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

A. YES THIS PREAPPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE: _____

B. NO PROGRAM IS NOT COVERED BY E.O. 12372
 OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?
 YES If "Yes" attach an explanation. NO

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.

A. Authorized Representative

| | | |
|---|------------------------------|---|
| Prefix Mr. | First Name Stephen | Middle Name A. |
| Last Name Owens | | Suffix |
| B. Title Director | | C. Telephone Number (give area code) 602-771-2203 |
| D. Signature of Authorized Representative | | E. Date signed |

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BUDGET INFORMATION - Non Construction Programs

SECTION A - BUDGET SUMMARY

| Grant Program Function Or Activity (a) | Catalog of Federal Domestic Assistance Number (b) | Estimated Unobligated Funds | | New Or Revised Budget | | |
|---|--|-----------------------------|--------------------|-----------------------|--------------------|--------------|
| | | Federal (c) | Non-Federal (d) | Federal (e) | Non-Federal (f) | Total (g) |
| 1. FY 2004 | -66-463 | | | \$160,000 | | \$160,000 |
| 2. Match | | | | | \$30,000 | \$30,000 |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. TOTALS | | | | \$160,000 | \$30,000 | \$190,000 |

SECTION B - BUDGET CATEGORIES

| 6. Object Class Categories | GRANT PROGRAM, FUNCTION OR ACTIVITY | | | | | |
|---|-------------------------------------|-----|--------------|-----|-----|--------------|
| | FY 2004 (1) | (2) | Match (3) | (4) | (5) | Total (6) |
| a. Personnel | | | \$15,583 | | | \$15,583 |
| b. Fringe Benefits | | | \$4,519 | | | \$4,519 |
| c. Travel | | | | | | |
| d. Equipment | | | | | | |
| e. Supplies | | | | | | |
| f. Contractual | \$160,000 | | | | | \$160,000 |
| g. Construction | | | | | | |
| h. Other | | | | | | |
| i. i. Total Direct Charges (sum of 6a-6h) | \$160,000 | | \$20,102 | | | \$180,102 |
| j. j. Indirect Charges | | | \$9,898 | | | \$9,898 |
| k. k. TOTALS (sum of 6i and 6j) | \$160,000 | | \$30,000 | | | \$190,000 |
| 7. Program Income | | | | | | |

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SECTION C - NON FEDERAL RESOURCES

| (a) Grant Program | (b) Applicant | (c) State | (d) Other Sources | (e) TOTALS |
|------------------------------------|---------------|-----------|-------------------|------------|
| 8. State Match | | 30,000 | | 30,000 |
| 9. | | | | |
| 10. | | | | |
| 11. | | | | |
| 12. TOTALS (sum of lines 8 and 11) | | 30,000 | | 30,000 |

SECTION D - FORECASTED CASH NEEDS

| | FY 2004 Available | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|------------------------------------|-------------------|-------------|-------------|-------------|-------------|
| 13. Federal | 160,000 | 85,000 | 25,000 | 25,000 | 25,000 |
| 14. Non Federal | 30,000 | 7,500 | 7,500 | 7,500 | 7,500 |
| 15. Total (sum of lines 14 and 24) | 190,000 | 92,500 | 32,500 | 32,500 | 32,500 |

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

| (a) Grant Program | (b) First | PAST FUNDING PERIODS (Years) | | |
|---------------------------------|-----------|------------------------------|-----------|------------|
| | | (c) Second | (d) Third | (e) Fourth |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. TOTALS (sum of lines 16-19) | | | | |

SECTION F - OTHER BUDGET INFORMATION

(ATTACH ADDITIONAL SHEETS IF NECESSARY)

| | |
|---|---|
| 21. Direct Charges: See detailed budget justification pages. (attached) | 22. Indirect Charges: 49.24% of Personnel and Fringe. |
| 23. Remarks: | |

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ADEQ WATER QUALITY DIV

602 771 4528 P.05

104(b)(3) Lake Mary Region Mercury TMDLs

Budget Period: 7/01/04-06/30/06

Budget Justification

| | FY 2004 Budget | | | Match | Total |
|--|-------------------|--|--|-----------------|------------------|
| Personnel Costs | | | | \$15,583 | \$15,583 |
| Fringe Benefits Fringe Benefits are computed at 29% for the Department of Environmental Quality | | | | \$4,519 | \$4,519 |
| Travel | | | | | |
| Out-of-State See separate out of state travel list. | | | | | |
| In-State Instate travel cost based on State authorized mileage and per diem rate. | | | | | |
| Equipment See separate equipment list. | | | | | |
| Other Operating Funds will be used to pay for non-capitalized equipment, training, maintenance and supplies during the grant period. | | | | | |
| Contractual See separate contractual list. | \$160,000 | | | | \$160,000 |
| Indirect The indirect cost rate for the Department of Environmental Quality is based on a fixed rate of 49.24%. | | | | \$9,898 | \$9,898 |
| TOTAL | \$160,000 | | | \$30,000 | \$190,000 |

104(b)(3) Lake Mary Region Mercury TMDLs

Budget Period 07/01/04 Thru 06/30/06

STATE MATCH

| <u>SECTION</u> | <u>CLASS</u> | <u>SALARY</u> | <u>MONTHS</u> | <u>COST</u> |
|--------------------------|-----------------------|---------------|---------------|-----------------|
| Hydrology S & A | Env. Prog. Spec. | \$34,898 | 3.00 | \$8,725 |
| | Section Manager | \$59,690 | 1.30 | \$6,479 |
| | Sub Total | | | \$15,204 |
| Proposed salary increase | | | | \$379 |
| | Total Personnel Costs | | | \$15,583 |
| | ERE 29% | | | \$4,519 |
| | INDIRECT 49.24% | | | \$9,898 |
| | TOTAL | | | \$30,000 |

*Amendment
use in bold*

**Lake Mary Region Mercury TMDLs
Amendment #1 (06/30/05)**

Name of Project: Lake Mary Region Mercury TMDLs

Contact Information: Karen Smith, Director
Water Quality Division
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007
(602) 771-2306; (602) 771-4634 (FAX)
smith.karen@ev.state.az.us

Is This a Continuation of a Previously Funded Project/Experience with 104(b)(3) Grants: Yes.
This amendment is a continuation of a previously funded project-EPA grant #CP-97995301-0 which was awarded in July, 2004. ADEQ is on target for the deliverables and deadlines outlined in the original grant proposal. This is an amendment to the original grant to add additional federal funds (\$10,000) for analytical work in support of wet deposition monitoring.

Proposed Budget:

| | Total Project Cost | Proposed ADEQ Cost Share | EPA Funding |
|---------------------------------|-----------------------|-----------------------------|------------------|
| Personnel | \$ 8,730 | \$ 8,730 | \$ 0 |
| ERE | 2,271 | 2,271 | 0 |
| Professional and Outside: | | | |
| ISA Northern Arizona University | 25,000 | 0 | 25,000 |
| Professional (Modeling) | 95,000 | 0 | 95,000 |
| Analytical (TMDL Lake samples) | 29,000 | 10,000 | 19,000 |
| (Background Lake samples) | 11,000 | 0 | 11,000 |
| (Fish Tissue samples) | 3,582 | 3,582 | 0 |
| (Air monitoring) | 10,000 | 0 | 10,000 |
| Indirect | 5,417 | 5,417 | 0 |
| Total | \$190,000 | \$ 30,000 | \$160,000 |

Proposed Federal Funding

Dollar amount requested from EPA in 2004: \$ 150,000

Amendment Dollar amount requested from EPA in 2005: \$ 10,000

Proposed Recipient Cost Share

Dollar amount of voluntary leverage funding offered by the State: \$ 30,000

Proposed Amount of Total Project Budget

\$ 190,000

Cost Effectiveness

Simultaneous development of four mercury TMDLs in the Lake Mary Region will reduce personnel time and eliminate the need for individual modeling contracts. As ADEQ has a number of other mercury impaired lakes that will require TMDLs, the technical approach and information from this project may be transerable to these other TMDLs.

Project Description

Completion of this project will result in the development of four Total Maximum Daily Loads (TMDLs) in the Lake Mary region near Flagstaff, Arizona for mercury-impaired lakes: Upper and Lower Lake Mary, Soldier Lake, and Long Lake. Completion of these TMDLs is a high priority because of the toxic threat to humans and animals from high levels of mercury in fish. These lakes are in close proximity of Flagstaff and receive significant sport fishing pressure throughout most of the year. Additionally, Upper and Lower Lake Mary carry a Domestic Water Source (DWS) designation and serve as a secondary water supply for the City of Flagstaff. Upper and Lower Lake Mary were listed by EPA Region 9 as impaired under section 303(d) of the Clean Water Act following advisories instituted by Arizona Department of Environmental Quality (ADEQ) and the Arizona Game and Fish Department (AGFD). Elevated concentrations of mercury in fish tissue collected from Soldier Lake and Long Lake have resulted in fish consumption advisories being issued and will likely be listed by EPA on the 2004 303(d) list.

ADEQ's Watershed Management Unit (WSMU) will communicate project progress, develop the TMDL implementation plans and distribute results to the stakeholders. ADEQ's Air Quality Division will offer guidance on site selection and assist with data collection, analysis and modeling of any air deposition data. The Air Division will also provide support during contract review and model development, as applicable. As part of this project, ADEQ will partner with Northern Arizona University (NAU) to sample lake sediment cores to try and characterize the recent history of metals deposition in these lakes. These intra- and inter-agency partnerships have been formed to develop the data sets necessary to discern non-point and point source contributions; quantify loads and allocations so that TMDLs can be calculated; and to establish effective implementation strategies.

Regional Setting

All of these lakes are located in the Coconino National Forest and are within the Little Colorado River Watershed. Upper and Lower Lake Mary are hydrologically connected and are located 6 miles south east of Flagstaff. Soldiers and Long Lake are two of three hydrologically connected lakes located 35 miles south east of Flagstaff. The geology of the surrounding area for these lakes and their immediate watersheds are underlain by a complex series of volcanic and sedimentary rocks.

Task #1- Collect Fish Tissue

In support of these TMDLs and to gauge the extent of the problem, ADEQ and AZGF are currently developing a sample plan for the collection and analysis of fish tissue from other waterbodies in this region. Samples will be taken this spring from a minimum of three additional lakes to determine if impairment is localized. The mean mercury concentration for walleye taken from the Soldiers Lake/Long Lake complex was 1.65 mg/kg [range from 1.1 mg/kg to 2.7 mg/kg]. This triggered the issuance of fish advisories for both lakes. A tissue sample collected from Soldiers Lake (2.7 mg/Kg) is the highest concentration ever recorded by ADEQ's Priority Pollutant Program. In contrast, fish tissue from lakes selected to measure the natural background concentrations of mercury in the region (Willow Springs Lake, Ashurst Lake and Stoneman Lake) show no impairment.

Task #2- Conduct Watershed/Lake/Aerial Reconnaissance & Sampling

2a) Identify potential sources

The sources of mercury to these lakes are unknown at this time. There is no evidence of past or present mining in any of the lake watersheds. Potential sources include: 1) geology (e.g., cinnabar is often associated with volcanic rock formations), 2) atmospheric deposition (e.g., little

actual Arizona deposition data is currently available) and 3) historic land use practices (e.g., sawmill and railroad). ADEQ will conduct watershed and lake reconnaissance to identify potential sources and mechanisms for loading.

2b) Complete Sample & Analysis Plan

ADEQ will review and assess the results from field reconnaissance, fish tissue results, and historic water quality data to develop the TMDL Sample & Analysis Plan (SAP). The SAP will provide for the extent and locations for the collection of credible data sufficient to identify sources, calculate loads and allocations, and calculate the TMDLs.

2c) Complete surface water and sediment sampling

Additional monitoring data is needed in order to develop a model and TMDL loads. ADEQ has performed two sampling events on Upper and Lower Lake Mary using ultra clean sample and analysis techniques. Screen sampling has been conducted at Kinnikinick Lake, Morman Lake, Soldiers Lake, Long Lake and Ashurst Lake. Mercury has been detected in the water column and sediments in all of these lakes. Over the first year of the project, ADEQ will conduct additional sampling on the four lakes with fish advisories and three background lakes. Sampling at two additional lakes may occur if the reconnaissance reveals further listings for mercury contamination.

2d) Perform wet deposition air monitoring to aid in source identification

ADEQ has obtained the equipment necessary to establish the first Mercury Deposition Network (MDN) site in Arizona. MDN is a cooperative effort with National Atmospheric Deposition Network program office. The Water Quality Division is working with the Air Quality Division (AQD) and the MDN-NADN Program to install the equipment at the ADEQ's Sycamore Canyon Improved Air Monitoring Station outside Williams, AZ. NADP staff will be traveling to Arizona in July, 2005 to train ADEQ staff in proper equipment operation and MDN sampling protocols.

Rain water samples collected by the equipment are analyzed for total mercury via EPA Method 1631E along with the corresponding quality control samples and protocols. The MDN Quality Assurance (QA) Plan has been approved by NADP Technical committee in 1997. see <http://nadp.sws.uiuc.edu/lib/qaplans/mdn-qap-1997.pdf>

MDN participants follow guidelines in MDN QA plan and procedures established for interregional research projects by cooperative State Research Service (USDA, 1987). All analytical work on the MDN Program is done by Frontier Geosciences in Seattle, WA. This amendment is to add \$10,000 in EPA discretionary funding in support of the analytical work for the wet deposition sampling.

Task #3- Characterize Metals Deposition

The Civil & Environmental Engineering Department (CEE) at NAU has proposed using 1.0 meter long surface sediment cores from both non-impacted and impacted lakes to characterize the recent (~50yrs) history of metals deposition in the region. Discrete sections of the cores will be analyzed for total mercury and three different isotopes of lead to determine if mercury and lead have been present in the sediments of these lakes, and if so, at what levels. If metals contamination has occurred, NAU will compare the timing among all the lakes. Concurrent arrival would indicate a widespread source consistent with atmospheric deposition. NAU will also examine ratios of lead isotopes as geologic and atmospheric sources may have distinctly different lead-isotope ratios and may provide information regarding sources.

Separate from this grant, the principle investigator on the coring study has also applied for an Intramural Grant within NAU to conduct a study of how fish in contaminated lakes bioaccumulate mercury using nitrogen stable isotopes. The study area would include Upper Lake Mary and Ashurst Lake. Both waterbodies contain elevated levels of mercury in the sediment, but fish from Ashurst Lake do not show contamination.

Task #4- Develop Model for Load Allocations and TMDL

It is anticipated that a dynamic water quality model(s) capable of modeling watershed and in-lake processes will be necessary to discern mercury concentrations originating from air, native soil, and anthropogenic sources; allocate loads needed for TMDL calculations; and identify and/or confirm the mechanisms for loading. Aerial deposition will present an additional challenge and will likely require a separate airshed model. This will require assistance and guidance from ADEQ's Air Division. ADEQ proposes modeling for the four listed lakes and will produce four mercury TMDLs, one for each lake.

Task # 5- Communicate Results

ADEQ will activate the stakeholder process early in this project with much of the public outreach/participation process being handled by the Watershed Management Unit. The principal stakeholders include: Arizona Game and Fish Department; US Forest Service (Coconino National Forest); City of Flagstaff; US Fish & Wildlife Service, US Geological Survey; private land owners and interested parties.

ADEQ anticipates holding a kickoff meeting in early summer to introduce the ADEQ team, present the issues, discuss work to date and the project. The next meeting will be after a contractor has been selected and has reviewed the available data. At this meeting, ADEQ will discuss possible modeling approaches, the extent of the dataset and pros and cons to the models. Future meeting(s) will present model runs with different scenarios leading up to a final model output and presentation of draft TMDL allocations and needed reductions. Review of the TMDL report and the TMDL implementation plan require additional meetings, public notices in local newspapers and the *Arizona Administrative Register*. Status of the process and key deliverables will also be posted on ADEQ's website for review.

As companions to the TMDL reports, WSMU will work with the stakeholders to develop a TMDL implementation plan that will clearly identify and prioritize water quality improvement actions (i.e. BMPs) necessary to address identified sources and achieve reductions, determine the anticipated timeframe to attain surface water quality standards, and identify possible funding sources.

Task # 6- Submit TMDLs

Four final TMDLs will be submitted to EPA following an extensive public comment period. Each will contain numeric and narrative targets for mercury based on the results of the tasks above. Deliverables to the EPA will include draft TMDL reports in January, 2006 and final TMDL reports by June 2006. ADEQ will provide project updates to the EPA during the regularly planned monthly teleconference and quarterly exception reporting.

Performance Measures

The table below identifies key deliverables to track progress towards completion of the project within the grant window. Indicators and benchmarks determined through modeling and development of the actual TMDLs and the associated allocations and reductions will be tracked

through the effectiveness monitoring that will be established for these lakes after commencement of implementation strategies.

Expected Project Results and Accomplishments Including Performance Measures and Results

| Tasks | Deliverables | Target Date |
|---|--|-----------------------------|
| #1- Collect Fish Tissue | Data to determine extent of impairment | April 2004 |
| #2- Conduct Watershed/Lake Reconnaissance | | |
| #2a- Identify Potential Sources | Source Identification | May 2004 |
| #2b- Complete Sample & Analysis Plan | Approved sample & analysis plan | June 2004 |
| #2c- Complete surface water and sediment sampling | Data for TMDLs model development | July 2005 |
| #2d Perform wet deposition air monitoring to aid in source identification | Data for TMDL model development | July, 2005 |
| #3- Characterize Metals Deposition (NAU) | Report submitted to ADEQ | July – September 2004 |
| #4- Develop Model for TMDLs, load allocations and reductions | TMDLs, load allocations & reductions | August – November 2005 |
| #5- Communicate Results | Stakeholder involvement | Commence Summer 2004 |
| #6- Submit TMDLs Draft TMDL Reports Final TMDL Reports | Four (4) TMDLs | January, 2006 June, 2006 |

104(b)(3) Lake Mary Region Mercury TMDLs

Budget Period 07/01/04 Thru 06/30/06

Amendment #1 06/30/05

| <u>SECTION</u> | <u>CONTRACTS</u> | <u>COST</u> |
|----------------|---|---------------------|
| Hydrologic S&A | ISA Northern Arizona University (sole source) | \$25,000 |
| | Professional modeling (competitive) | \$95,000 |
| | Analytical: | |
| | TMDL Lake Samples (\$19,000) | |
| | Background Lake Samples (\$11,000) | |
| | Subtotal Water Analyses | \$30,000 |
| | Wet deposition air monitoring/source identification | \$10,000 |
| | | \$160,000 |

| GOAL #1: Clean & Safe Water | | Program #4610: WQ Assessment - GW/SW | |
|--|--|---|---|
| Objective #3: Protect and improve water quality on a watershed basis – number of Arizona’s watersheds where: water quality standards are met in at least 80 percent of the assessed water segments; all assessed water segments maintain their quality and at least 20 percent of assessed water segments show improvement above conditions as of 2002. | | | |
| TASK/ GRANT | OUTPUT DESCRIPTION | EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL | RESPONSIBLE SECTION/ STAFF |
| 1.3.16 | TASK: TMDL Analyses (Cont'd) DELIVERABLES: | | |
| Queen Creek ** | 2) NPDES 104(b)3 Grants a) FY03/04 – Bill Williams Watershed (Alamo Lake) TMDL (Hg) i) perform water quality sampling ii) calculate TMDL iii) draft TMDL report iv) public notice/response period v) submit TMDL report to EPA for approval b) FY04/05 – Lake Mary Regional TMDLs (Hg in 4 lakes) i) commence model development ii) complete surface water sampling iii) calculate TMDL, load allocations and reductions iv) draft TMDL report v) public participation vi) submit final TMDL to EPA for approval c) FY05/06 – Queen Creek Copper TMDL (Cu) i) Conduct Watershed Monitoring 1) Conduct reconnaissance to inform SAP 2) Conduct sediment and surface water sampling ii) Complete sampling and analysis plan iii) Purchase and install automated devices iv) Public participation v) Contract professional modeling services 1) Issue TASOW 2) Award contract vi) Communicate results 1) Data Summary meeting 2) Model Report meeting vii) Submit Modeling Report to EPA | T = i) ongoing ii) 9/05 iii) 10/05 iv) 2/06 v) 3/06 i) 7/05 ii) 12/05 iii) 1/06 iv) 5/06 v) ongoing vi) 10/06 i) 1) 6/05 2) through 2/07 ii) 6/05 iii) 1/06 iv) through 6/07 v) 1) 7/06 2) 9/06 vi) 1) 1/07 2) 5/07 vii) 6/07 | Hydrology |

** Pending award

| GOAL #1: Clean & Safe Water | | Program #4610: WQ Assessment - GW/SW | |
|--|---|--|---|
| Objective #3: Protect and improve water quality on a watershed basis -- number of Arizona's watersheds where water quality standards are met in at least 80 percent of the assessed water segments; all assessed water segments maintain their quality and at least 20 percent of assessed water segments show improvement above conditions as of 2002. | | | |
| TASK/ GRANT | OUTPUT DESCRIPTION | EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL | RESPONSIBLE SECTION/ STAFF |
| 1.3.16 | TASK: TMDL Analyses (Cont'd) DELIVERABLES: | | |
| | 4) Pre-TMDL activities for: a) San Pedro – Aravaipa Creek to Gila River (E. coli, Se) i) perform reconnaissance ii) perform water quality sampling | T = i) through FY ii) through FY | Hydrology |
| | b) Santa Cruz River – Mexico Border to Nogales (E. coli) i) perform reconnaissance ii) perform water quality sampling | T = i) through FY ii) through FY | |
| | c) Gila River – Bonita Creek to Yuma Wash (E. coli) i) perform reconnaissance ii) perform water quality sampling | T = i) through FY ii) through FY | |
| | 5) Long-term TMDL projects a) Little Colorado River – Porter Tank to McDonalds Wash (Cu, Ag, SSC) i) Update TMDL SAP to include SSC ii) Perform water quality sampling b) Verde River – headwaters to Horseshoe Reservoir (N, P) i) Receive USGS GW/SW report ii) research data collected and studies completed since completion of assimilative capacity study iii) develop workplan to update assimilative capacity study c) Gila pesticide investigation - *numerous segments (numerous parameters) i) Perform workplan activities d) Mercury – Air equipment monitoring support | T = i) 10/05 ii) through FY i) 10/05 ii) 12/05 iii) 3/06 i) through FY T = through FY | Hydrology |

| GOAL #1: Clean & Safe Water | | Program #4610: WQ Assessment - GW/SW | |
|---|---|--|----------------------------------|
| Objective #3: Protect and improve water quality on a watershed basis – number of Arizona’s watersheds where: water quality standards are met in at least 80 percent of the assessed water segments; all assessed water segments maintain their quality and at least 20 percent of assessed water segments show improvement above conditions as of 2002. | | | |
| TASK/ GRANT | OUTPUT DESCRIPTION | EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL | RESPONSIBLE SECTION/ STAFF |
| 1.3.16 | TASK: TMDL Analyses (Cont'd) DELIVERABLES: | | |

| FTE FUNDING SOURCE | MONTHS | AMOUNT |
|---|--------|---------|
| GF | 13.10 | 52,219 |
| ST 319(h) NPS Impl. VII | 9.00 | 29,718 |
| ST 319(h) NPS Impl. VI | 4.00 | 15,483 |
| PPG | 39.50 | 122,272 |
| WQARF 319(h) NPS Impl. VII | 1.00 | 2,992 |
| WQARF 104(b)(3) Lake Mary TMDL | 3.00 | 8,975 |
| 319(h) NPS Impl. VII | 41.50 | 127,327 |
| 319(h) NPS Impl. VI | 43.50 | 149,492 |
| Total | 154.60 | 508,478 |
| Contract: Mercury TMDL grant | | |
| Contract: Queen Creek Grant | | |
| Contract: Lake Mary Region Mercury TMDL | | |



Janet Napolitano
Governor

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
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Stephen A. Owens
Director

Ms. Carolyn Truong, Chief
Grants Administration Section, PMD-7
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: Revision 104(b)(3) Lake Mary Region Mercury TMDLs Grant
#CP-97995301-0

Dear Ms. Truong:

Enclosed for your consideration is the Arizona Department of Environmental Quality's revised grant application for the above referenced program. This revised application requests an additional \$10,000 in federal funding. This increases the total federal funding request to \$160,000 and state match is \$30,000. This brings the total request of this grant to \$190,000. The project period is from July 1, 2004, to June 30, 2006.

A budget justification which includes budgeted categories is enclosed for your information and review.

If your staff has any questions, please contact Joan Card for programmatic information at (602) 771-2306 or Joe Tuiteleapaga for budgetary information at (602) 771-4406.

Sincerely,

Stephen A. Owens
Director

Enclosure

Northern Regional Office
1515 East Cedar Avenue • Suite F • Flagstaff, AZ 86004
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733